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NASA Policy Directive

NPD 8730.1BEffective Date: August 13,
2003Expiration Date: December 13,
2010**COMPLIANCE IS MANDATORY**[Printable Format \(PDF\)](#)

Request Notification of Change (NASA Only)

Subject: Metrology and Calibration (Revalidated 4/29/04)

Responsible Office: Office of Safety and Mission Assurance

1. POLICY

It is NASA policy to accomplish the following:

a. Require that suppliers of calibration laboratory services to NASA be compliant with the calibration laboratory competency requirements identified in ANSI/NCSL Z540.1-1994 (R2002) ([Requirement 11010](#)).

b. Require that suppliers of calibration laboratory services be accredited to ANSI/ISO/IEC 17025:2000, where it is appropriate and beneficial to NASA to require independent accreditation, and be compliant with the calibration laboratory competency requirements identified in ANSI/NCSL Z540.1-1994 (R2002) ([Requirement 11021](#)).

c. Maintain calibration on all test and measuring equipment and safety instruments used to perform measurements associated with the following functions:

(1) Acceptance testing (determining that a part, component, or system meets specifications).

(2) Inspection, maintenance, or calibration.

(3) Flight hardware qualification.

(4) Measurement of processes where test equipment accuracy is essential for the safety of personnel or the public.

(5) Telecommunication, transmission, and test equipment where exact signal interfaces and circuit confirmations are essential to mission success ([Requirement 11022](#)).

(6) Development, testing, and special applications where the specifications, end products, or data are accuracy sensitive, including instruments used in hazardous and critical applications ([Requirement 30895](#)).

d. Limit use of noncalibrated instruments to only applications where substantiated

accuracy is not required, or for "indication only" purposes in nonhazardous, noncritical applications ([Requirement 11022](#)).

2. APPLICABILITY

This NPD applies to NASA Headquarters, NASA Centers, including Component Facilities, and to the Jet Propulsion Laboratory and other NASA contractors to the extent specified in their contracts.

3. AUTHORITY

42 U.S.C. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.

4. APPLICABLE DOCUMENTS

- a. 48 CFR Part 46, Federal Acquisition Regulations (FAR) Part 46, "Quality Assurance."
- b. 48 CFR Part 1846, NASA FAR Supplement Part 1846, "Quality Assurance."
- c. NPD 8700.1, NASA Policy for Safety and Mission Success.
- d. ANSI/NC SL Z540.1-1994 (R2002), "General Requirements for Calibration Laboratories and Measuring and Test Equipment."
- e. ANSI/ISO/IEC 17025:2000, "General Requirements for the Competence of Testing and Calibration Laboratories."

5. RESPONSIBILITY

- a. Reserved
- b. The Associate Administrator for Safety and Mission Assurance is responsible for the following activities:
 - (1) Designating a responsible Center for developing and implementing the Metrology and Calibration Program Plan ([Requirement 11004](#)).
 - (2) Approving the Metrology and Calibration Program Plan and metrology and calibration operating plans and authorizing such specific policy and requirements as identified therein ([Requirement 11005](#)).
 - (3) Authorizing the charter and resources for the NASA Metrology and Calibration Working Group (MCWG). The group will act as a technical forum to discuss Agency policy and issues common to all standards and calibration operations and to recommend research projects that meet the present needs and future strategic goals of the Agency.
- c. Center Directors are responsible for the following activities:
 - (1) Implementing and monitoring use of this NPD at their respective NASA Centers and Component Facilities ([Requirement 11007](#)).
 - (2) Designating a representative to the NASA MCWG and ensuring representation at the

annual MCWG workshops as well as representation at other appropriate industry-related symposia and other government agency metrology and calibration meetings ([Requirement 11008](#)).

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS/VERIFICATION

None.

8. CANCELLATION

NPD 8730.1A, Metrology and Calibration, dated August 13, 2003.

REVALIDATED

April 29, 2004

/s/ Sean O'Keefe
Administrator

ATTACHMENT A: (TEXT)

None.

(URL for Graphic)

None.

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